

HEMI-SYNC® IN THE TREATMENT OF CHEMICALLY DEPENDENT PATIENTS

by Bogdan F. Maliszewski, M.D.

As a physician, Bogdan Maliszewski has been deeply involved in investigating and implementing effective methods for the treatment of chemically dependent patients. He moved from his practice in Seattle, Washington, to Tampa, Florida, four years ago. Dr. Maliszewski became a member of the Professional Division in 1988 and recently submitted this article on the impact of Hemi-Sync in drug rehabilitation.

Between the years 1987 and 1989 I practiced as attending physician at the Glenbeigh Hospital in Tampa, a rehabilitation and treatment center for alcohol and drug abuse. During that period, Hemi-Sync was introduced as an adjunct to the intervention program. The preliminary results suggest a substantial increase in recovery for cocaine-addicted patients using Hemi-Sync.

The treatment program was based on the traditional twelve-step Alcoholics Anonymous recovery program. An average stay in the hospital was about one month, and patient age ranged from early teens to over seventy years old. In the older group, alcoholism was the most prevalent dependency; in the younger group, the most popular was cocaine, then marijuana, alcohol, and opiates. About twenty patients participated in the program each month; an approximate total of 300 for the year.

The success rate, based on sobriety for at least one year after treatment, was best for alcohol, reaching about fifty percent of the patients, but poor for cocaine, achieving only twenty-five percent or less. These percentages correspond to the national average recovery rate. Over thirty-five years ago the American Medical Association recognized alcoholism as a disease. Since then many other chemical dependencies have been added to this category. One of the most serious and challenging addictions is that of cocaine.

Progress in research and science, especially biochemistry and physiology of the brain, has allowed us to understand many aspects of the diseases of chemical dependency. With alcoholism, it has been found that brain activity in alcoholics differs from that of nonalcoholics, as measured on an electroencephalogram (EEG). Alcoholics show a prevalence of fast Beta activity and a deficit of Alpha and Theta frequencies. Their sleep is shallow, lacking the Delta waves characteristic of deep sleep. The excess of Beta frequencies on EEG is characteristic of anxiety, restlessness, nervous tension, and inability to relax. At the same time, very important neurotransmitters playing a crucial role in the reward system in the brain, show lower levels than nonalcoholics. They belong to the Beta endorphins and enkephalins group of chemicals. It has also been discovered that these neurotransmitters are released during sports activity, relaxation, meditation, and other activities.

Alcohol's influence on the brain is very characteristic: the number of Alpha waves in the brain increase greatly, but only in alcoholics. In nonalcoholics this action is very limited. Thus, it becomes clear that many alcoholics drink to relieve stress and anxiety, characterized by increased Beta waves on EEG. It has also been discovered that continuous use of alcohol causes depletion of endorphins and enkephalins in the brain, resulting in a state of anhedonia—inability to feel pleasure—and later, a state of depression.

With cocaine addiction, dopamine, another important neurotransmitter, becomes depleted, causing severe depression. This is preceded by a feeling of very strong euphoria which lasts only briefly. The euphoria is so strong that it causes almost instantaneous dependency. Later on, after treatment attempts, recall of that euphoria is the main cause of relapse and subsequent return to use. Cocaine is a stimulant and causes an increase in Beta frequencies on EEG.

It occurred to me that if alcoholics and patients addicted to cocaine were trained to increase the proportion of Alpha and Theta waves in their EEGs, they would increase the chance of recovery. This could be achieved by biofeedback, massage, sports, meditation, and restricted environment stimulation therapy (REST), among other approaches.

However, it seemed that the Hemi-Sync technology would probably be one of the most effective and easiest methods to use in the hospital setting. Direct action of Hemi-Sync on the brain provides an excellent therapeutic tool. Experience of positive states of mind, not achieved by alcohol or drugs, would reinforce the patient's ability to cope with stress and the craving for alcohol and drugs. In medicine, it is relatively easy to cope with stress and anxiety by using tranquilizers like Xanax, Valium, etc., but only for a short time. These medicines, if used for longer periods, also lead to chemical dependency.

We started to use the PREP side of the Relax tape from the H-PLUS® series in a group setting, on an average of three times weekly. With the exception of the cocaine addicts, patients were exposed to the tapes after stressful group therapy sessions. Before the tape, the cocaine-addicted group participated in special desensitization sessions involving exposure to the paraphernalia of cocaine use—pipes, white powder resembling cocaine, etc. They even pretended to use cocaine to evoke the craving for this powerful stimulant.

Overall, patients responded very positively to the tapes. At first, most of them fell asleep during the sessions, although many suffered from chronic insomnia caused by the drugs. Later, the patients participated more consciously in the relaxation exercise. Some of them used the tapes individually, in their free time. After completion of the treatment program, they had the option of purchasing H-PLUS® *Relax* to use at home. Perhaps ten to fifteen percent exercised this option.

After one year we attempted to follow up with the former patients. It was a difficult task, but the results were very encouraging. While the rate of recovery improved with alcoholics, the most dramatic increase was achieved in the group of cocaine patients. Recovery increased from twenty-five percent to about fifty percent of patients still drug-free one year after treatment.

Attitude toward the therapy was very important. More spiritually oriented patients responded better to the treatment program. For this group, we recommended further use of the Hemi-Sync tapes, such as Focus 10 and Focus 12 exercises. We used *Pain Control* for patients suffering from chronic pain, and *De-Hab* for others. These results were also positive, especially those with the *Pain Control* tape.

In my opinion, the Hemi-Sync technology can be used in treatment of chemically dependent patients very effectively. However, more controlled studies are necessary in order to promote this method of treatment among the professionals in the field of addiction medicine.

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